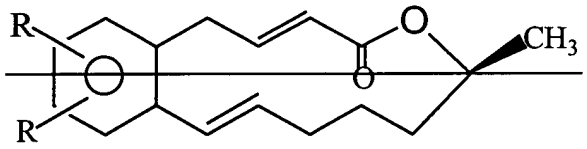
Amendments to the Claims:

Please cancel claims 23, 27, 35-47 and 50-51. Please amend claims 24, 31, 48 and 49. This listing of claims replaces all prior versions and listings of claims in the application:

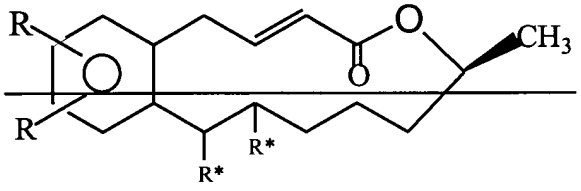
Listing of Claims:

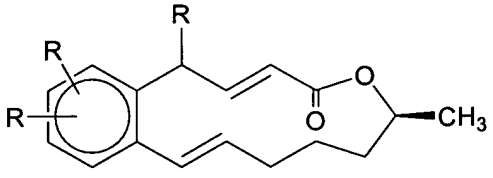
1-23. (Canceled)

24. (Currently amended) A method of enhancing learning in a mammal comprising administering to the mammal a compound having a formula selected from the group consisting of:



~~and~~





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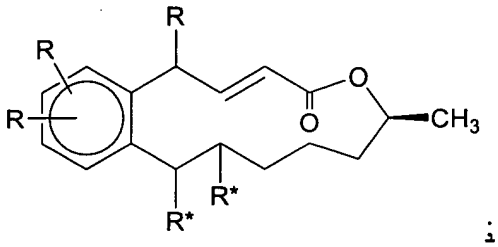


wherein each R is independently selected from -OH, -OR^1, -SH, -SR^1, -NR^2R^2, and a carbonyl oxygen; and R^* is hydrogen or –OH; and wherein R^1 is a C_1 to C_4 alkyl; and R^2 is a C_1 to C_4 alkyl.

25. (Previously presented) The method of claim 24, wherein the amount of the compound administered is from about 1.0 to 15.0 mg/kg of body weight.

26. (Previously presented) The method of claim 25, wherein the amount of the compound administered is from about 3.0 to 10.0 mg/kg of body weight.

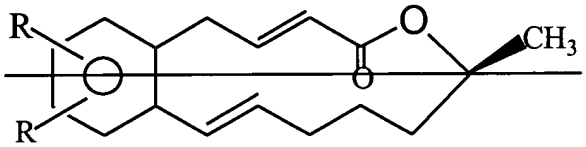
27. (Canceled)

28. (Previously presented) The method of claim 24, wherein the mammal has a healthy brain.

29. (Previously presented) The method of claim 24, wherein the compound is administered up to seven days before the learning.

30. (Previously presented) The method of claim 24, wherein the compound is administered up to two hours after the learning.

31. (Currently amended) A method for treating memory dysfunction in a mammal comprising administering to the ~~peripheral circulation of said~~ mammal a compound having a formula selected from [[a]]the group consisting of:



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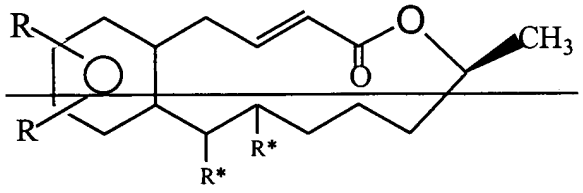
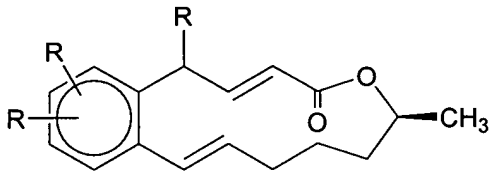
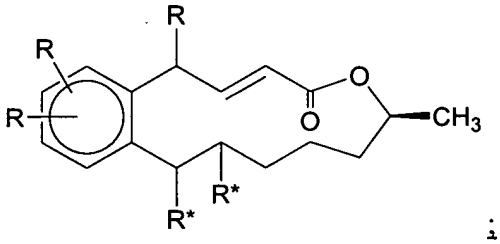




and



wherein each R is independently selected from -OH, -OR^1, -SH, -SR^1, -NR^2R^2, and a carbonyl oxygen; and R^* is hydrogen or –OH; and wherein R^1 is a C_1 to C_4 alkyl; and R^2 is a C_1 to C_4 alkyl.

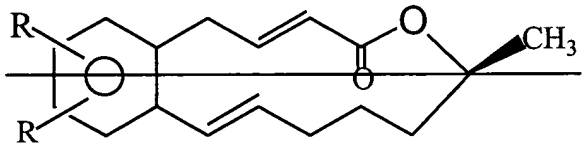
32. (Previously presented) The method of claim 31, wherein the memory dysfunction is associated with a decrease in the efficiency of synaptic transmission or loss of functioning synapses in the hippocampus.

33. (Previously presented) The method of claim 31, wherein the amount of the compound is from about 1.0 to 15.0 mg/kg of body weight.

34. (Previously presented) The method of claim 33, wherein the amount of the compound is from about 3.0 to 10.0 mg/kg of body weight.

35-47 (Canceled)

48. (Currently amended) A ~~pharmaceutical~~ composition comprising a physiologically acceptable carrier and a compound having a formula selected from the group consisting of:



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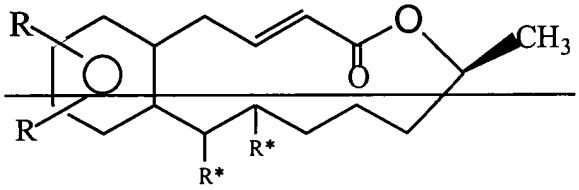
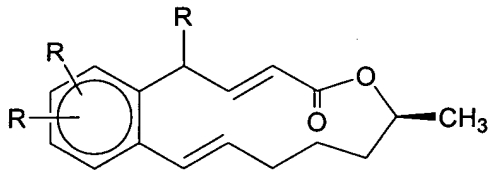
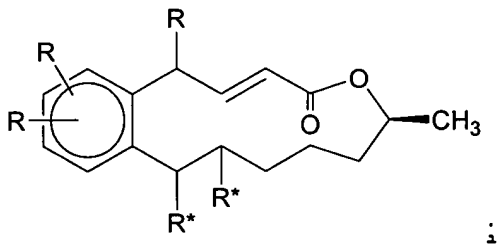




and



wherein each R is independently selected from -OH, -OR^1, -SH, -SR^1, -NR^2R^2, and a carbonyl oxygen; and R^* is hydrogen or –OH; and wherein R^1 is a C_1 to C_4 alkyl; and R^2 is a C_1 to C_4 alkyl~~, and a physiologically acceptable carrier~~.

49. (Currently amended) The ~~pharmaceutical~~ composition of claim 48, wherein the physiologically acceptable carrier is an aqueous or non-aqueous sterile vehicle.

50-51 (Canceled)